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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/708,492

11/09/2000

Pui Lun Lau

6202-41

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21967 7590 07/24/2007

HUNTON & WILLIAMS LLP
INTELLECTUAL PROPERTY DEPARTMENT
1900 K STREET, N.W.
SUITE 1200
WASHINGTON, DC 20006-1109

EXAMINER

BRUCKART, BENJAMIN R

ART UNIT

PAPER NUMBER

2155

MAIL DATE

DELIVERY MODE

07/24/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/708,492	Applicant(s) LAU, PUI LUN	
	Examiner Benjamin R. Bruckart	Art Unit 2155	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 and 33-50 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-31, 33-50 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Detailed Action

Status of Claims:

Claims 1-31, 33-50 are pending in this Office Action.

Claim 32 remains cancelled.

Claims 1, 11 and 22 are amended.

Claims 49-50 are new.

Response to Arguments

Applicant's arguments filed 12/8/06 have been fully considered but are found not persuasive. See remarks below.

Drawings

The new drawings filed 7/2/07 are accepted.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3, 13, 24, 30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 3, 13, 24, 30 recite interrogating computers in an "alternating manner" which is indefinite. See below remarks.

Applicant's invention as claimed:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claim 1-20, 22-31, 33-50 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,850,531 by Rao et al.

Regarding claim 1,

a multiple port unit adapted for coupling one or more computers to multiple peripheral devices over a network (Rao: col. 4, lines 54-67; Fig. 1), said multiple port unit comprising:

plural network ports, each of said network ports being configured to couple the multiple port unit to a computer over a respective network link (Rao: col. 5, lines 8-24); and

plural communication serial ports, each of said communication serial ports being configured to couple the multiple port unit to a peripheral device (Rao: col. 5, lines 45-52); and

a control unit to interrogate the network links (Rao: col. 2, lines 40-49) and to communicatively couple said communication serial ports to a selected one of said network ports based on the interrogation of the network links (Rao: col. 8, lines 53- col. 9, line 26), the control

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unit further determining whether it is time to interrogate the network links (Rao: col. 8, lines 53- col. 9, line 26).

Regarding claim 2, a multiple port unit as recited in claim 1, wherein said network ports are configured to couple the multiple port unit to plural computers and wherein said control unit is configured to interrogate each of the plural the computers and to control the peripheral devices based on the interrogation of the computers (Rao: col. 8, lines 53- col. 9, line 26).

Regarding claim 3, a multiple port unit as recited in claim 2, wherein said control unit interrogates the computers over each of the network links in an alternating manner (Rao: col. 27, lines 20-29).

Regarding claim 4, a multiple port unit as recited in claim 3, wherein said network ports comprise Ethernet ports (Rao: col. 5, lines 18-24).

Regarding claim 5, a multiple port unit as recited in claim 4, wherein said communication serial ports comprise serial ports (Rao: col. 5, lines 45-52).

Regarding claim 6, a multiple port unit as recited in claim 4, further comprising two redundant power supplies (Rao: col. 8, lines 24-25).

Regarding claim 7, a multiple port unit as recited in claim 1, where said control unit is configured to interrogate the network links using a network carrier signal (Rao: col. 8, lines 53- col. 9, line 26).

Regarding claim 8, wherein said control unit is configured to interrogate the computers using Internet Packet Groper (Rao: col. 9, lines 8-14).

Regarding claim 9, a multiple port unit as recited in claim 2, comprising two network ports and 8 communications ports (Rao: col. 5, lines 17-52).

Regarding claim 10, a multiple port unit as recited in claim 2, further comprising a data bus coupled to said control unit, said network ports and said communication serial ports (Rao: col. 6, lines 11-35).

Regarding claim 46, a multiple port unit as recited in claim 1, wherein the interrogation is effected by the control unit sending a packet (Rao: col. 9, lines 1-26).

Regarding claim 47, a multiple port unit as recited in claim 1, wherein the interrogation of the network links relates to whether a particular network link is working properly (Rao: col. 8, lines 53- col. 9, line 26).

Regarding claim 48, a multiple port unit as recited in claim 1, wherein the control unit being further configured to determine whether it is time to interrogate the network links includes a determination if a preset time for switching network links has elapsed (Rao: col. 27, lines 20-29).

Regarding claim 49, a multiple port unit as recited in claim 1, wherein said control unit identifies a network link operating properly based on the interrogation (Rao: col. 8, lines 53- col. 9, line 26).

Regarding claim 50, a multiple port unit as recited in claim 49, wherein said control unit communicatively couples said communications serial ports to the selected one of said network ports to avoid the network link not operating properly (Rao: col. 9, lines 15-26).

Regarding claim 11,
a computer architecture (Rao: Fig. 1) comprising:
plural computers (Rao: Fig. 7);
plural peripheral devices (Rao: Fig. 7); and

a multiple port unit having plural network ports (Rao: col. 5, lines 8-24), plural serial ports (Rao: col. 5, lines 45-52), and a control unit (Rao: col. 2, lines 40-49), each of said network ports being coupled to one of said plural computers over a respective network link (Rao: col. 8, lines 53- col. 9, line 26), each of said communication serial ports being coupled to a peripheral device (Rao: col. 8, lines 53- col. 9, line 26), said control unit interrogating the network links and to communicatively coupling said communication serial ports to a selected one of said network ports based on the interrogation of the network links (Rao: col. 8, lines 53- col. 9, line 26).

Regarding claim 12, a computer architecture as recited in claim 11, wherein said control unit is configured to interrogate each of the plural computers and to control the peripheral devices based on the interrogation of the computers (Rao: col. 8, lines 53- col. 9, line 26).

Regarding claim 13, a computer architecture as recited in claim 12, wherein said control unit interrogates the computers over each of the network links in an alternating manner (Rao: col. 27, lines 20-29).

Regarding claim 14, a computer architecture as recited in claim 13, wherein said network ports comprise Ethernet ports (Rao: col. 5, lines 18-24).

Regarding claim 15, a computer architecture as recited in claim 14, wherein said communication serial ports comprise serial interfaces (Rao: col. 5, lines 45-52).

Regarding claim 16, a computer architecture as recited in claim 14, further comprising two redundant power supplies (Rao: col. 8, lines 24-25).

Regarding claim 17, a computer architecture as recited in claim 11, wherein said control unit is configured to interrogate said network links using a network carrier signal (Rao: col. 8, lines 53- col. 9, line 26).

Regarding claim 18, a computer architecture as recited in claim 12, wherein said control unit is configured to interrogate said computers using Packet Internet Groper (Rao: col. 9, lines 8-14).

Regarding claim 19, a computer architecture as recited in claim 12, comprising two network ports and 8 communications ports (Rao: col. 5, lines 17-52).

Regarding claim 20, a computer architecture as recited in claim 12, wherein said peripheral devices are intelligent electronic devices (Rao: col. 5, lines 17-52; computers, ISP, content server farms).

Regarding claim 22,

a multiple port unit adapted for coupling one or more computers to multiple intelligent electronic devices over a network (Rao: col. 4, lines 54-67; Fig. 1), said multiple port unit comprising:

two Ethernet ports, each of said Ethernet ports being configured to couple the multiple port unit to a computer over a respective Ethernet link (Rao: col. 5, lines 8-24); and

plural serial ports, each of said serial ports being configured to couple the multiple port unit to an intelligent electronic device (Rao: col. 5, lines 45-52); and

a control unit to interrogate the Ethernet links (Rao: col. 2, lines 40-49) and to communicatively couple said serial ports to a selected one of said Ethernet ports based on the interrogation of the Ethernet links (Rao: col. 8, lines 53- col. 9, line 26), the control unit being further determining whether it is time to interrogate the Ethernet links (Rao: col. 8, lines 53- col. 9, line 26).

Regarding claim 23, a multiple port unit as recited in claim 22, wherein said control unit is configured to interrogate each of the plural the computers and to designate a selected one of the computers as an active computer to control the intelligent electronic devices based on the interrogation of the computers (Rao: col. 8, lines 53- col. 9, line 26).

Regarding claim 24, a multiple port unit as recited in claim 23, wherein said control unit interrogates the computers over each of the Ethernet links in an alternating manner (Rao: col. 27, lines 20-29).

Regarding claim 25, a multiple port unit as recited in claim 24, further comprising two redundant power supplies (Rao: col. 8, lines 24-25).

Regarding claim 26, a multiple port unit as recited in claim 22, wherein said control unit is configured to interrogate the Ethernet links using an Ethernet carrier signal (Rao: col. 8, lines 53- col. 9, line 26).

Regarding claim 27, a multiple port unit as recited in claim 23, wherein said control unit is configured to interrogate the computers using Packet Internet Groper (Rao: col. 9, lines 8-14).

Regarding claim 28, a multiple port unit as recited in claim 23, comprising 8 serial ports (Rao: col. 5, lines 17-52).

Regarding claim 29, a multiple port unit as recited in claim 22, further comprising a data bus coupled to said control unit, said Ethernet ports, and said serial ports (Rao: col. 6, lines 11-35).

Regarding claim 30,

a multiple port unit adapted for coupling one or more computers to multiple peripheral devices over a network (Rao: col. 4, lines 54-67; Fig. 1), said multiple port unit comprising:

plural network ports, each of said network ports being configured to couple the multiple port unit to a computer over a respective network link (Rao: col. 5, lines 8-24); and

plural communication serial ports, each of said communication serial ports being configured to couple the multiple port unit to a peripheral device (Rao: col. 5, lines 45-52); and

control means for interrogating the network links and communicatively coupling said serial ports to a selected one of said network ports based on the interrogation of the network links (Rao: col. 2, lines 40-49); and

wherein said control means interrogates plural computers over each of the network links in an alternating manner (Rao: col. 27, lines 20-29).

Regarding claim 31, a multiple port unit as recited in claim 30, wherein said network ports are configured to couple the multiple port unit to plural computers and wherein said control means comprises computer interrogating means for interrogating each of the plural computers designating a selected one of the computers as an active computer to control the peripheral devices based on the interrogation of the computers (Rao: col. 8, lines 53- col. 9, line 26).

Regarding claim 33, a multiple port unit as recited in claim 31, wherein said network communication serial ports comprise Ethernet ports (Rao: col. 5, lines 18-24).

Regarding claim 34, a multiple port unit as recited in claim 33, wherein said communication serial ports comprise serial ports (Rao: col. 5, lines 45-52).

Regarding claim 35, a multiple port unit as recited in claim 33, further comprising two redundant power supplies (Rao: col. 8, lines 24-25).

Regarding claim 36, a multiple port unit as recited in claim 30, wherein said control means comprises means for detecting a network carrier signal (Rao: col. 8, lines 53- col. 9, line 26).

Regarding claim 37, a multiple port unit as recited in claim 31, wherein said computer interrogation means comprises Packet Internet Groper (Rao: col. 9, lines 8-14).

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Regarding claim 38, a multiple port unit as recited in claim 30, further comprising a data bus coupled to said control mean, said network ports and said communication serial ports (Rao: col. 6, lines 11-35

Regarding claim 39, a multiple port unit as recited in claim 31, comprising two network ports and 8 communications ports (Rao: col. 5, lines 17-52).

Regarding claim 40,

a method of coupling plural peripheral devices to computers (Rao: col. 4, lines 54-67; Fig. 1), said method comprising the steps of:

interrogating the status of plural network connections with a control unit of a multiple port unit having plural network ports coupled to the plural network connections (Rao: col. 5, lines 8-24; col. 8, lines 53- col. 9, line 26) and a plural communication serial port coupled to peripheral devices (Rao: col. 5, lines 45-52), the control unit determining whether it is time to interrogate prior to performing the interrogation (Rao: col. 8, lines 53- col. 9, line 26); and

coupling the plural communication serial ports to one of the network connections based on the results of said step of interrogating the status of plural network connections (Rao: col. 8, lines 53- col. 9, line 26).

Regarding claim 41, a method as recited in claim 40 further comprising the steps of:

interrogating the status of plural computers respectively coupled to the network connections (Rao: col. 8, lines 53- col. 9, line 26); and

controlling the peripheral devices based on the results of said step of interrogating the status of plural computers (Rao: col. 8, lines 53- col. 9, line 26).

Regarding claim 42, a method as recited in claim 41, wherein said step of interrogating the status of plural network connections comprises detecting a carrier on each network connection (Rao: col. 8, lines 53- col. 9, line 26).

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Regarding claim 44, a method as recited in claim 41, further comprising the step of maintaining a record of the status of each computer and each network connection in the control unit (Rao: col. 8, lines 53- col. 9, line 26).

Regarding claim 45, a method as recited in claim 41, further comprising the step of transferring status data between the computers at the direction of the control unit (Rao: col. 8, lines 53- col. 9, line 26).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable by U.S. Patent No. 6,850,531 by Rao et al in view of U.S. Patent No. 6,222,714 by Hoffman et al.

Regarding claims 21, the Rao reference teaches a computer architecture as recited in claim 20, with intelligent electronic devices. The Rao reference fails to teach controlling protective relays. However the Hoffman reference teaches wherein said intelligent electronic devices are protective relays (Hoffman: col. 7, lines 30-46) in order to provide digital signals to control the device (Hoffman: col. 7, lines 30-46).

It would have been obvious to one of ordinary skill in the art to create the system as taught by Rao to include the intelligent devices such as protective relays as taught by Hoffman in order to provide digital signals to a controller for controlling a device.

REMARKS

Applicant has made no amendments and argues the independent claim over the cited Rao reference.

The Applicant Argues:

- 1) The 35 U.S.C. 112 indefinite rejection on “an alternating manner” is clear.
- 2) The Rao reference does not teach “a control unit”

In response, the examiner respectfully submits:

- 1) Applicant’s language for interrogating the links in an “alternating manner” is broad and unclear. The examiner cannot ascertain from applicant’s specification how the term alternating is described or used. For examiner how is it alternating? from left to right or top to

bottom? An alternating manner does not specifically and distinctly show how it is being achieved or realized. Therefore the rejection remains.

2) The examiner contends the Rao reference anticipates the claimed subject matter. Rao teaches a Chasis Management Module (CMM) that works in conjunction with a fault tolerant application manager (FTAM) to monitor the ports and links of the device for failures so that it can recover from faults and failures (col. 8, lines 53-col. 9, line 26 and col. 2, lines 40-49). These modules interrogate the network links for the failures.

Applicant argues there is no disclosure of the claimed control mechanism that interrogates the network links because Rao depends on hardware driver to report whether the link is functioning. The examiner does not see the merit to this argument. Applicant has not defined the claims to exclude hardware or software only means to any part of the controller, nor has applicant explained how Rao does not teach “a control mechanism that interrogates the network links.”

Rao anticipates the “time-determination” feature as argued in col. 9, lines 1-26 where “each FM sends out hello messages at fixed time intervals” in order to detect failures. This timed interval is substantially similar to applicant’s specification page 9, lines 4-13 in which a PING, “respectively based on a predetermined interrogation period” to monitor the operating status of the links. The control unit would use the same time-determination because it checks at fixed length intervals.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period

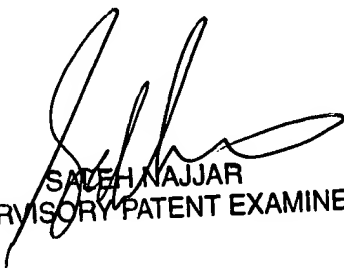
will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin R. Bruckart whose telephone number is (571) 272-3982. The examiner can normally be reached on 8:00-5:30PM with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saleh Najjar can be reached on (571) 272-4006. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Benjamin R Bruckart
Examiner
Art Unit 2155



SALEH NAJJAR
SUPERVISORY PATENT EXAMINER